

Bk. 22 Dr. 12

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

Plan Survey

HIGHLAND LANE

From Cedar St. To Ash St.

Road Acc't. No. W. 60

Date Filed 10-26-39

File

Transit Notes

Highland Ave.

from Cedar St. to Ash St.

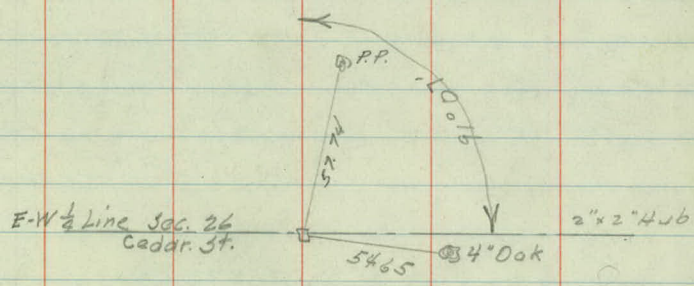
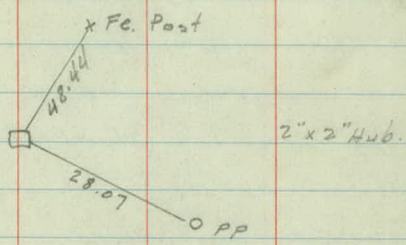
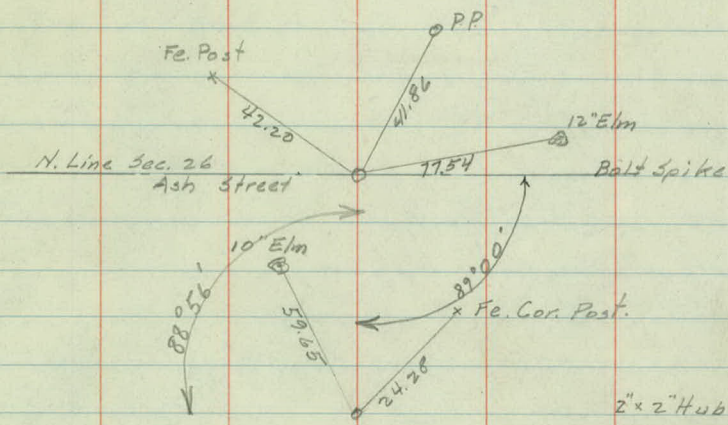
Sta

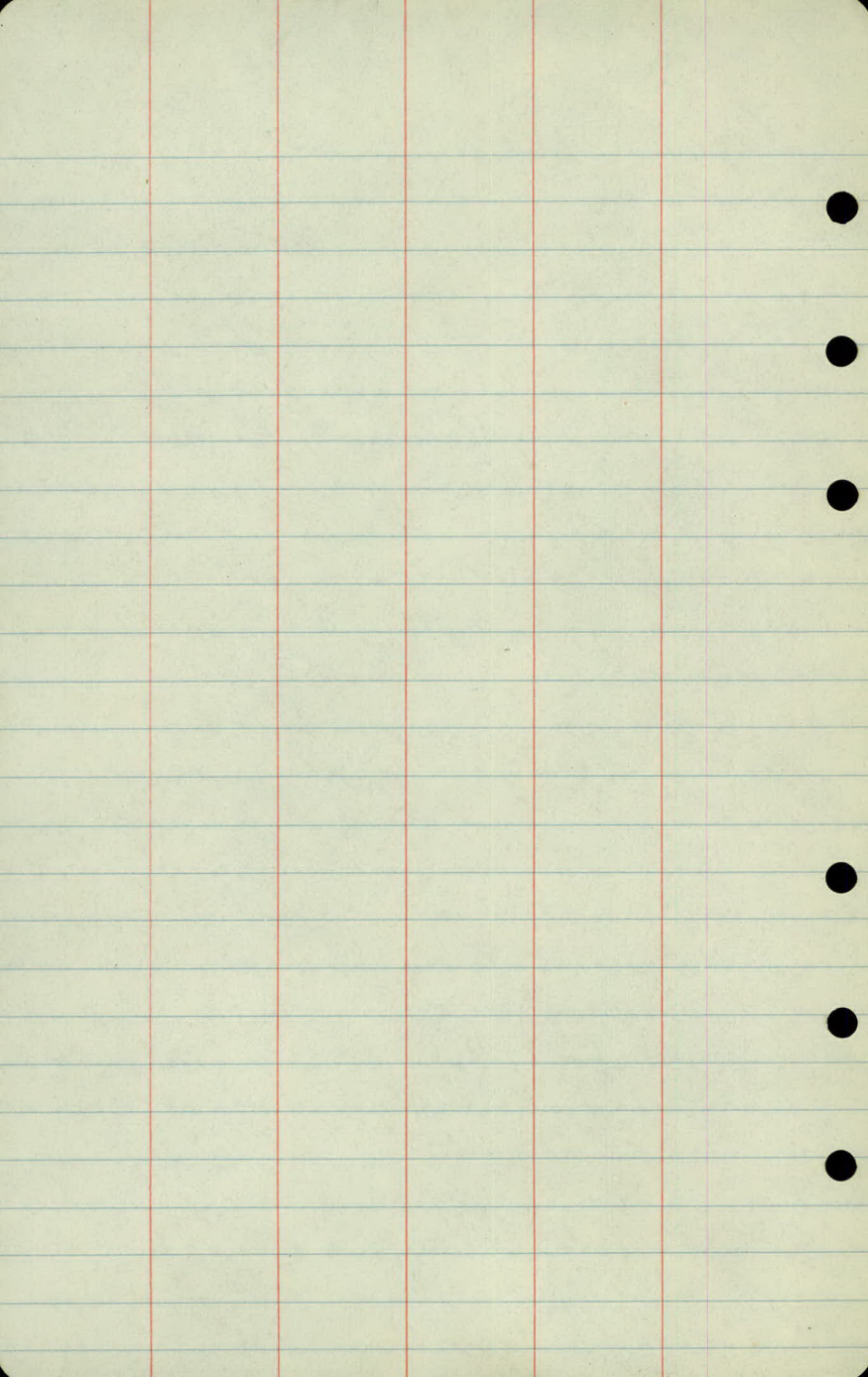
26+30.04 P.O.T.

13+15.15 P.O.T. $\neq$ Birch Sta

7+60 P.O.T.

0+00





Topography

Highland Ave.

6

5

4

3

2

1

0

+20 shldr x $\frac{1}{2}$

+06 shldr. x $\frac{1}{2}$

+ 68 Trail Xs $\frac{1}{2}$ = = = = =

+ 90 Fa. Con. 12'

Trail 12

Trail 13

Trail 12
+ 97 PP - 24

Cultivated

Hoy. Field

Trail 12

Trail 11

Trail - 12'

+ 53 PP - 23

+ 25 Ent 12'

Cedar St.

12' Oiled Surf.

13

12

11

10

9

8

7

+71 10" Elm-24'

②

* * * 40 Fe. Cor 6

Fe. 6

x

x

x

Fe 8

x

x

0

Pasture
Fe. 9'
+94 PP 24

x

x

Fe 9

x

x

Fe 11

x

x

Pasture
Fe. 12

x

0

+45 PP 24'

x

Cultivated

20

19

18

17

16

15

14

Fe. 15

Hay field

Fe. 27

+476 Fe. Cor. 13

Fe. 29

Cultivated

Fe. 31

+82 PP 25

+47 Fe. Cor. 33

+13-14" E/m-24

Cult

Meadow

+33 14" E/m 24

+31 6" E/m 24

+37 PP 25

+44 shldr x 3 $\frac{1}{2}$

+17 shldr. x 2 $\frac{1}{2}$

26

25

24

23

22

21

Ash 3+ 18' Oiloid Surface

9' Trail - 0-0

9' Trail - 0-0

Hay Field

9' Trail 3

Hay Field

+79 PP- 26

+85 6" Elm-24

+91 Fe. Cor. 24

+106 Fe. Cor. 21

+63 1/2" Elm-24

Fe. 28

Fe. 18

+81 15" Elm-22

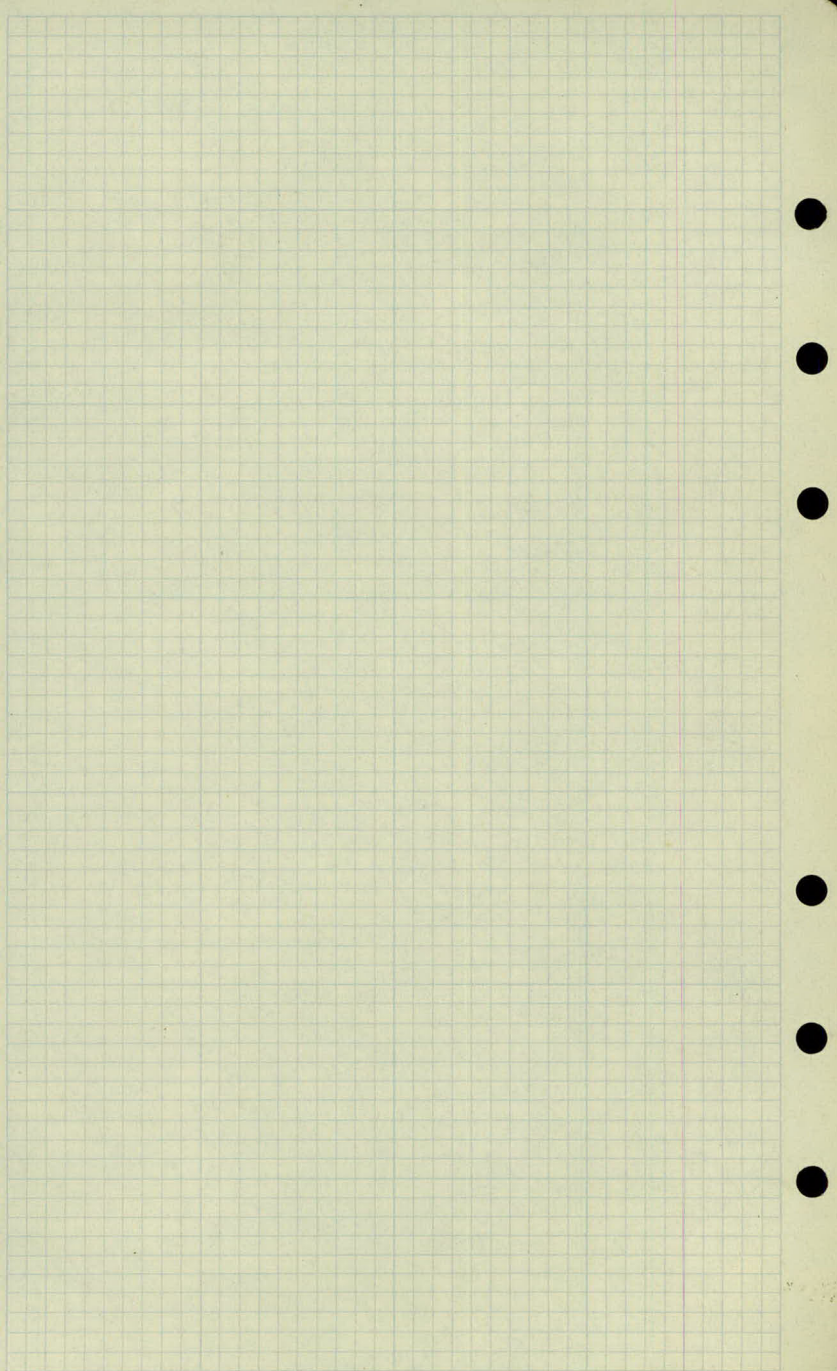
+61 Orch- 38

+61 X Fe. 25

+99 PP- 26

Fe. 15

Fe. 27



Cross Sections

Highland Ave.

Sta	+	π	-	Elev
B.M	9.04	976.67		967.63
0	9.04		7.2	69.5
+14	£ Cedar St.		7.3	69.4
+50			7.1	69.6
1			7.5	69.2
+50			7.9	68.8
2			9.0	67.7
+50			9.9	66.8
3			10.9	65.8
T.P.	2.56	969.12	10.11	966.56
+33			4.3	64.8
4			7.5	61.6
+50			9.4	59.7
5			10.3	58.8

Spike in 6" Oak S.E. Cor Highland & Cedar

$\frac{37}{50}$ $\frac{52}{25}$ 7.2 $\frac{7.9}{13}$ $\frac{9.1}{31}$ $\frac{10.2}{50}$

$\frac{2.0}{125}$ $\frac{1.5}{100}$ $\frac{2.0}{75}$ $\frac{3.6}{50}$ $\frac{5.2}{27}$ 7.3 $\frac{9.7}{30}$ $\frac{11.4}{50}$ $\frac{13.9}{75}$ $\frac{16.4}{100}$

$\frac{3.6}{50}$ $\frac{5.7}{25}$ 7.1 $\frac{7.8}{10}$ $\frac{9.0}{20}$ $\frac{11.8}{50}$

$\frac{4.3}{50}$ $\frac{5.8}{29}$ 7.5 $\frac{8.7}{17}$ $\frac{10.3}{32}$ $\frac{12.7}{50}$

$\frac{6.2}{50}$ $\frac{7.0}{26}$ 7.9 $\frac{8.4}{16}$ $\frac{9.4}{33}$ $\frac{11.1}{50}$

$\frac{8.1}{50}$ $\frac{8.4}{25}$ 9.0 $\frac{9.2}{2}$ $\frac{8.3}{5}$ $\frac{8.5}{15}$ $\frac{9.2}{37}$ $\frac{10.0}{50}$

$\frac{9.8}{50}$ $\frac{9.7}{25}$ 9.9 $\frac{9.6}{4}$ $\frac{9.5}{16}$ $\frac{10.4}{50}$

$\frac{11.2}{50}$ $\frac{11.1}{25}$ 10.9 $\frac{10.8}{3}$ $\frac{10.3}{6}$ $\frac{9.6}{32}$ $\frac{9.4}{50}$

$\frac{4.2}{50}$ $\frac{4.3}{25}$ 4.3 $\frac{4.2}{3}$ $\frac{3.5}{5}$ $\frac{2.9}{17}$ $\frac{2.2}{35}$ $\frac{1.9}{50}$

$\frac{8.4}{50}$ $\frac{8.0}{25}$ 7.5 $\frac{7.8}{4}$ $\frac{7.3}{5}$ $\frac{6.7}{17}$ $\frac{6.4}{30}$ $\frac{6.4}{50}$

$\frac{10.0}{50}$ $\frac{9.7}{25}$ 9.4 $\frac{9.5}{6}$ $\frac{9.0}{8}$ $\frac{8.5}{20}$ $\frac{7.2}{50}$

$\frac{10.9}{50}$ $\frac{10.5}{25}$ 10.3 $\frac{9.9}{7}$ $\frac{9.9}{20}$ $\frac{8.8}{50}$

Sta	+	π	-	Elev
		969.12		
5+50			11.2	57.9
T.P.	0.83	957.97	11.98	957.14
6			1.6	56.4
+28			2.3	55.7
+62			4.6	53.4
7			5.6	52.4
+60			6.1	51.9
8			8.9	49.1
T.P.	0.58	947.67	10.88	947.09
+50			4.8	42.9
+80			8.0	39.7
9+20			9.9	37.8
+50			10.8	36.9
10			11.6	36.1
T.P.	2.80	939.80	10.67	937.08

$$\begin{array}{r} 13.2 \\ 50 \end{array} \quad \begin{array}{r} 11.8 \\ 25 \end{array} \quad 11.2 \quad \begin{array}{r} 10.8 \\ 8 \end{array} \quad \begin{array}{r} 10.5 \\ 18 \end{array} \quad \begin{array}{r} 10.2 \\ 50 \end{array}$$

$$\begin{array}{r} 4.1 \\ 50 \end{array} \quad \begin{array}{r} 2.4 \\ 25 \end{array} \quad 1.6 \quad \begin{array}{r} 1.2 \\ 7 \end{array} \quad \begin{array}{r} 0.8 \\ 17 \end{array} \quad \begin{array}{r} +0.5 \\ 50 \end{array}$$

$$\begin{array}{r} 4.9 \\ 50 \end{array} \quad \begin{array}{r} 3.7 \\ 25 \end{array} \quad 2.3 \quad \begin{array}{r} 2.3 \\ 5 \end{array} \quad \begin{array}{r} 2.4 \\ 21 \end{array} \quad \begin{array}{r} 1.6 \\ 50 \end{array}$$

$$\begin{array}{r} 6.2 \\ 50 \end{array} \quad \begin{array}{r} 5.5 \\ 27 \end{array} \quad 4.6 \quad \begin{array}{r} 4.6 \\ 9 \end{array} \quad \begin{array}{r} 4.1 \\ 13 \end{array} \quad \begin{array}{r} 3.2 \\ 50 \end{array}$$

$$\begin{array}{r} 7.8 \\ 50 \end{array} \quad \begin{array}{r} 6.9 \\ 25 \end{array} \quad 5.6 \quad \begin{array}{r} 5.3 \\ 11 \end{array} \quad \begin{array}{r} 3.7 \\ 50 \end{array}$$

$$\begin{array}{r} 8.5 \\ 50 \end{array} \quad \begin{array}{r} 7.0 \\ 25 \end{array} \quad 6.1 \quad \begin{array}{r} 5.8 \\ 13 \end{array} \quad \begin{array}{r} 6.5 \\ 50 \end{array}$$

$$\begin{array}{r} 9.0 \\ 50 \end{array} \quad \begin{array}{r} 8.4 \\ 25 \end{array} \quad 8.9 \quad \begin{array}{r} 9.1 \\ 10 \end{array} \quad \begin{array}{r} 9.4 \\ 18 \end{array} \quad \begin{array}{r} 10.5 \\ 50 \end{array}$$

$$\begin{array}{r} 2.7 \\ 50 \end{array} \quad \begin{array}{r} 3.1 \\ 25 \end{array} \quad 4.8 \quad \begin{array}{r} 4.5 \\ 11 \end{array} \quad \begin{array}{r} 4.7 \\ 32 \end{array} \quad \begin{array}{r} 2.7 \\ 50 \end{array}$$

$$\begin{array}{r} 7.4 \\ 50 \end{array} \quad \begin{array}{r} 7.6 \\ 26 \end{array} \quad 8.0 \quad \begin{array}{r} 7.7 \\ 11 \end{array} \quad \begin{array}{r} 6.1 \\ 22 \end{array} \quad \begin{array}{r} 2.3 \\ 50 \end{array}$$

$$\begin{array}{r} 10.8 \\ 50 \end{array} \quad \begin{array}{r} 10.6 \\ 25 \end{array} \quad 9.9 \quad \begin{array}{r} 9.8 \\ 10 \end{array} \quad \begin{array}{r} 6.6 \\ 50 \end{array}$$

$$\begin{array}{r} 11.3 \\ 50 \end{array} \quad \begin{array}{r} 11.3 \\ 35 \end{array} \quad 10.8 \quad \begin{array}{r} 10.8 \\ 9 \end{array} \quad \begin{array}{r} 10.7 \\ 24 \end{array} \quad \begin{array}{r} 9.0 \\ 50 \end{array}$$

$$\begin{array}{r} 11.7 \\ 50 \end{array} \quad \begin{array}{r} 12.0 \\ 27 \end{array} \quad 11.6 \quad \begin{array}{r} 11.6 \\ 27 \end{array} \quad \begin{array}{r} 11.0 \\ 50 \end{array}$$

Sta	+	π	-	Elev
		939.80		
10 + 50			4.3	35.5
11			4.4	35.4
+50			4.8	35.0
12			5.0	34.8
+50			5.3	34.5
13			5.4	34.4
+50			5.4	34.4
B.M.			4.39	935.41
14			4.6	35.2
+30			4.5	35.3
+83			7.5	32.3
15 + 12			7.6	32.2
+50			6.2	33.6
T.P.	380	937.92	5.68	934.12

935.42

$\frac{3.9}{50}$ $\frac{4.0}{25}$ 4.3 $\frac{3.9}{9}$ $\frac{4.3}{20}$ $\frac{3.6}{50}$

$\frac{3.3}{50}$ $\frac{4.1}{27}$ 4.4 $\frac{4.5}{10}$ $\frac{3.7}{50}$

$\frac{5.2}{50}$ $\frac{5.2}{25}$ 4.8 $\frac{4.7}{9}$ $\frac{4.5}{50}$

$\frac{5.6}{50}$ $\frac{5.6}{23}$ 5.0 $\frac{4.7}{6}$ $\frac{4.4}{17}$ $\frac{3.9}{50}$

$\frac{6.5}{50}$ $\frac{5.8}{28}$ 5.3 $\frac{5.1}{6}$ $\frac{4.7}{16}$ $\frac{3.3}{50}$

$\frac{7.6}{50}$ $\frac{6.6}{20}$ $\frac{5.4}{6}$ $\frac{5.8}{3}$ 5.4 $\frac{5.1}{7}$ $\frac{4.4}{16}$ $\frac{3.4}{50}$

↖ 2.16' w g.R.

$\frac{5.7}{50}$ $\frac{5.8}{25}$ 5.4 $\frac{5.3}{7}$ $\frac{4.5}{50}$

Spike in 10" Elm 30' Lt Sta. 13+75

$\frac{4.0}{50}$ $\frac{4.3}{25}$ 4.6 $\frac{4.9}{8}$ $\frac{5.4}{50}$

$\frac{3.4}{50}$ $\frac{4.0}{25}$ 4.5 $\frac{4.9}{12}$ $\frac{6.0}{50}$

$\frac{6.1}{50}$ $\frac{6.7}{27}$ 7.5 $\frac{8.1}{50}$

$\frac{6.4}{50}$ $\frac{6.9}{27}$ $\frac{7.4}{7}$ 7.6 $\frac{7.6}{15}$ $\frac{8.0}{50}$

$\frac{6.5}{50}$ $\frac{6.6}{32}$ $\frac{6.4}{15}$ 6.2 $\frac{6.5}{7}$ $\frac{6.0}{50}$

Sta	+	π	-	Elev
		937.92		
16			4.5	33.4
	+50		3.3	34.6
17			3.3	34.6
	+50		3.4	34.5
18			4.7	33.2
	+50		6.0	31.9
19			6.6	31.3
	+50		6.3	31.6
20			6.4	31.5
	+50		6.1	31.8
T. P.	9.19	944.41	2.70	935.22
21			10.1	34.3
	+50		9.4	35.0

$\frac{4.4}{50}$ $\frac{4.3}{31}$ $\frac{4.4}{11}$ 4.5 $\frac{4.5}{15}$ $\frac{4.1}{50}$

$\frac{3.6}{50}$ $\frac{3.4}{33}$ $\frac{3.7}{14}$ 3.3 $\frac{3.4}{14}$ $\frac{3.5}{50}$

$\frac{3.5}{50}$ $\frac{3.5}{38}$ $\frac{2.7}{36}$ $\frac{3.4}{18}$ 3.3 $\frac{3.5}{50}$

$\frac{3.7}{50}$ $\frac{3.2}{30}$ 3.4 $\frac{3.7}{50}$

$\frac{4.3}{50}$ $\frac{4.5}{30}$ 4.7 $\frac{5.0}{50}$

$\frac{4.6}{50}$ $\frac{4.5}{30}$ 6.0 $\frac{6.4}{31}$ $\frac{6.0}{50}$

$\frac{5.7}{50}$ $\frac{5.5}{30}$ 6.6 $\frac{6.7}{25}$ $\frac{6.0}{50}$

$\frac{5.9}{50}$ $\frac{6.0}{17}$ 6.3 $\frac{6.4}{20}$ $\frac{6.0}{29}$ $\frac{7.0}{50}$

$\frac{7.2}{50}$ $\frac{6.4}{27}$ $\frac{6.4}{17}$ 6.4 $\frac{5.9}{14}$ $\frac{6.3}{21}$ $\frac{5.9}{50}$

$\frac{6.7}{50}$ $\frac{6.2}{18}$ $\frac{5.6}{6.1}$ $\frac{5.7}{14}$ $\frac{4.5}{22}$ $\frac{4.5}{50}$

$\frac{11.7}{50}$ $\frac{10.3}{27}$ $\frac{11.0}{21}$ $\frac{10.7}{11}$ 10.1 $\frac{9.0}{16}$ $\frac{9.0}{23}$ $\frac{8.5}{30}$ $\frac{7.9}{50}$

$\frac{11.5}{50}$ $\frac{10.2}{26}$ $\frac{10.0}{7}$ 9.4 $\frac{8.4}{17}$ $\frac{7.5}{27}$ $\frac{6.4}{50}$

Sta

+

 π

-

Elev

944.41

22

9.7

34.7

+50

8.3

36.1

23

6.6

37.8

+23

6.1

38.3

24

5.8

38.6

+50

5.0

39.4

T.P.

6.52

946.10

4.83

939.58

25

6.3

39.8

+50

5.4

40.7

26 + 06

4.6

41.5

+09

4.6

41.5

+13

4.6

41.5

+17

4.7

41.4

$$\begin{array}{r} 11.5 \\ 50 \end{array} \quad \begin{array}{r} 10.6 \\ 24 \end{array} \quad 9.7 \quad \begin{array}{r} 7.6 \\ 18 \end{array} \quad \begin{array}{r} 6.4 \\ 32 \end{array} \quad \begin{array}{r} 5.1 \\ 50 \end{array}$$

$$\begin{array}{r} 10.8 \\ 50 \end{array} \quad \begin{array}{r} 9.9 \\ 24 \end{array} \quad \begin{array}{r} 9.2 \\ 4 \end{array} \quad 8.3 \quad \begin{array}{r} 6.4 \\ 18 \end{array} \quad \begin{array}{r} 3.6 \\ 50 \end{array}$$

$$\begin{array}{r} 9.6 \\ 50 \end{array} \quad \begin{array}{r} 9.2 \\ 37 \end{array} \quad \begin{array}{r} 7.0 \\ 11 \end{array} \quad 6.6 \quad \begin{array}{r} 6.7 \\ 8 \end{array} \quad \begin{array}{r} 4.7 \\ 24 \end{array} \quad \begin{array}{r} 3.0 \\ 50 \end{array}$$

$$\begin{array}{r} 9.4 \\ 50 \end{array} \quad \begin{array}{r} 8.5 \\ 32 \end{array} \quad \begin{array}{r} 7.5 \\ 13 \end{array} \quad 6.1 \quad \begin{array}{r} 6.2 \\ 3 \end{array} \quad \begin{array}{r} 6.7 \\ 4.5 \end{array} \quad \begin{array}{r} 5.2 \\ 9 \end{array} \quad \begin{array}{r} 3.1 \\ 30 \end{array} \quad \begin{array}{r} 2.4 \\ 50 \end{array}$$

$$\begin{array}{r} 8.2 \\ 50 \end{array} \quad \begin{array}{r} 6.7 \\ 9 \end{array} \quad \begin{array}{r} 6.1 \\ 7 \end{array} \quad 5.8 \quad \begin{array}{r} 6.0 \\ 3 \end{array} \quad \begin{array}{r} 6.5 \\ 5.6 \end{array} \quad \begin{array}{r} 5.4 \\ 9 \end{array} \quad \begin{array}{r} 3.2 \\ 33 \end{array} \quad \begin{array}{r} 3.2 \\ 50 \end{array}$$

$$\begin{array}{r} 7.2 \\ 50 \end{array} \quad \begin{array}{r} 5.8 \\ 9 \end{array} \quad \begin{array}{r} 5.0 \\ 7 \end{array} \quad 5.0 \quad \begin{array}{r} 5.1 \\ 3 \end{array} \quad \begin{array}{r} 5.6 \\ 4.6 \end{array} \quad \begin{array}{r} 4.2 \\ 9 \end{array} \quad \begin{array}{r} 3.2 \\ 27 \end{array} \quad \begin{array}{r} 2.5 \\ 50 \end{array}$$

$$\begin{array}{r} 7.0 \\ 50 \end{array} \quad \begin{array}{r} 6.6 \\ 32 \end{array} \quad \begin{array}{r} 6.8 \\ 7 \end{array} \quad \begin{array}{r} 6.2 \\ 5 \end{array} \quad 6.3 \quad \begin{array}{r} 6.5 \\ 5 \end{array} \quad \begin{array}{r} 7.0 \\ 6.7 \end{array} \quad \begin{array}{r} 6.4 \\ 9 \end{array} \quad \begin{array}{r} 5.5 \\ 34 \end{array} \quad \begin{array}{r} 5.1 \\ 50 \end{array}$$

$$\begin{array}{r} 5.2 \\ 50 \end{array} \quad \begin{array}{r} 5.0 \\ 30 \end{array} \quad \begin{array}{r} 5.7 \\ 7.9 \end{array} \quad \begin{array}{r} 5.4 \\ 5 \end{array} \quad 5.4 \quad \begin{array}{r} 5.7 \\ 5 \end{array} \quad \begin{array}{r} 6.3 \\ 6.7 \end{array} \quad \begin{array}{r} 5.8 \\ 9 \end{array} \quad \begin{array}{r} 5.4 \\ 31 \end{array} \quad \begin{array}{r} 5.1 \\ 50 \end{array}$$

$$\begin{array}{r} 5.3 \\ 50 \end{array} \quad \begin{array}{r} 5.7 \\ 31 \end{array} \quad \begin{array}{r} 5.3 \\ 13 \end{array} \quad 4.6 \quad \begin{array}{r} 4.8 \\ 11 \end{array} \quad \begin{array}{r} 5.0 \\ 25 \end{array} \quad \begin{array}{r} 4.5 \\ 50 \end{array}$$

$$\begin{array}{r} 7.0 \\ 50 \end{array} \quad \begin{array}{r} 6.3 \\ 18 \end{array} \quad \begin{array}{r} 5.1 \\ 15 \end{array} \quad 4.6 \quad \begin{array}{r} 5.4 \\ 23 \end{array} \quad \begin{array}{r} 6.6 \\ 25 \end{array} \quad \begin{array}{r} 7.0 \\ 50 \end{array}$$

$$\begin{array}{r} 7.0 \\ 50 \end{array} \quad \begin{array}{r} 6.3 \\ 18 \end{array} \quad \begin{array}{r} 5.1 \\ 15 \end{array} \quad 4.6 \quad \begin{array}{r} 5.3 \\ 23 \end{array} \quad \begin{array}{r} 6.6 \\ 25 \end{array} \quad \begin{array}{r} 7.0 \\ 50 \end{array}$$

$$\begin{array}{r} 5.4 \\ 50 \end{array} \quad \begin{array}{r} 5.0 \\ 23 \end{array} \quad 4.7 \quad \begin{array}{r} 5.0 \\ 25 \end{array} \quad \begin{array}{r} 5.4 \\ 50 \end{array}$$

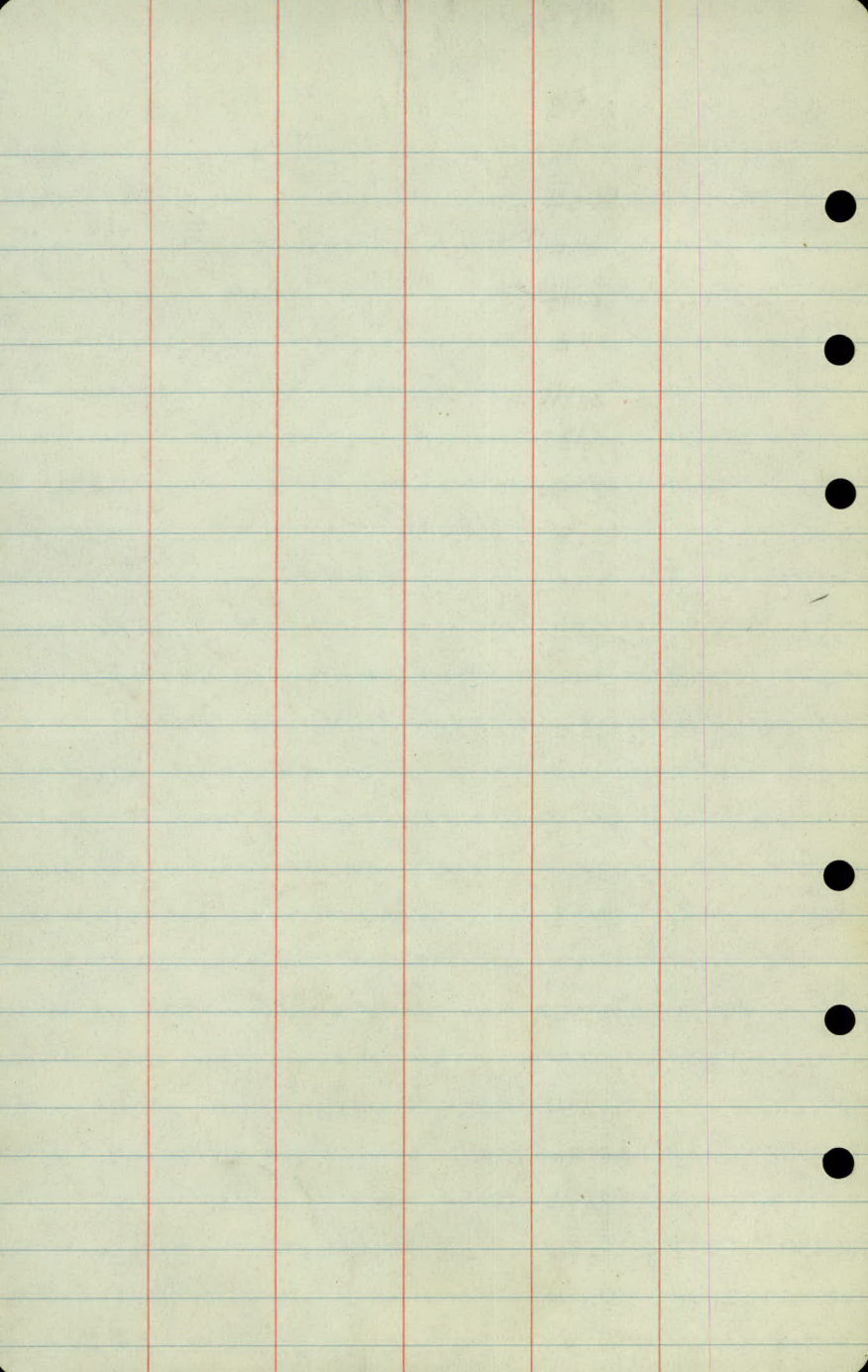
Sta	+	π	-	Elev.
		946.10		
26+30	± Ash St.		4.7	41.4
B.M.			1.05	942.05 (942.13)

$\frac{5.0}{50}$

4.7

$\frac{4.9}{50}$

Spike in 12" Elm N.E. Cor. Ash & Highland



Bench Levels
Combined
Highland Ave & Birch St.

Received 3/30/39
A. Crampston

Pt.	+	π	-	Elev.
B.M.	4.06	945.23	1	941.17
T.P.	4.15	943.35	6.03	939.20
T.P.	8.32	946.40	5.27	938.08
B.M.			3.84	942.56
B.M.	7.10	943.20		936.10
B.M.			1.07	942.13
B.M.	2.95	934.12		931.17
T.P.	9.58	943.01	0.69	933.43
T.P.	3.68	944.84	1.85	941.16
T.P.	5.48	943.73	6.59	938.25
B.M.	0.21		0.21	943.52
T.P.	2.04	945.38	0.39	943.34
T.P.	3.98	942.41	6.95	938.43
T.P.	12.53	954.43	0.51	941.90
T.P.	5.54	959.44	0.53	953.90
T.P.	8.76	964.66	3.54	955.90
T.P.	12.23	976.08	0.81	963.85
T.P.	3.27	974.37	4.98	971.10
B.M.	6.74		6.74	967.63
T.P.	1.10	967.67	7.80	966.57
T.P.	0.99	958.13	10.53	957.14
T.P.	0.61	947.54	11.20	946.93
T.P.	3.01	940.01	10.54	937.00
B.M.			4.59	935.42

Top Brass Plug at White Bear Ave. & Ash St.

Drill Hole in Pavmt. White Bear Ave & Birch St
Spike in 8" Oak 200' Rt Sta 17+10 (Ash St. Notes '33)

Spike in 12" Elm N.E. Cor. Highland Ave & Ash St

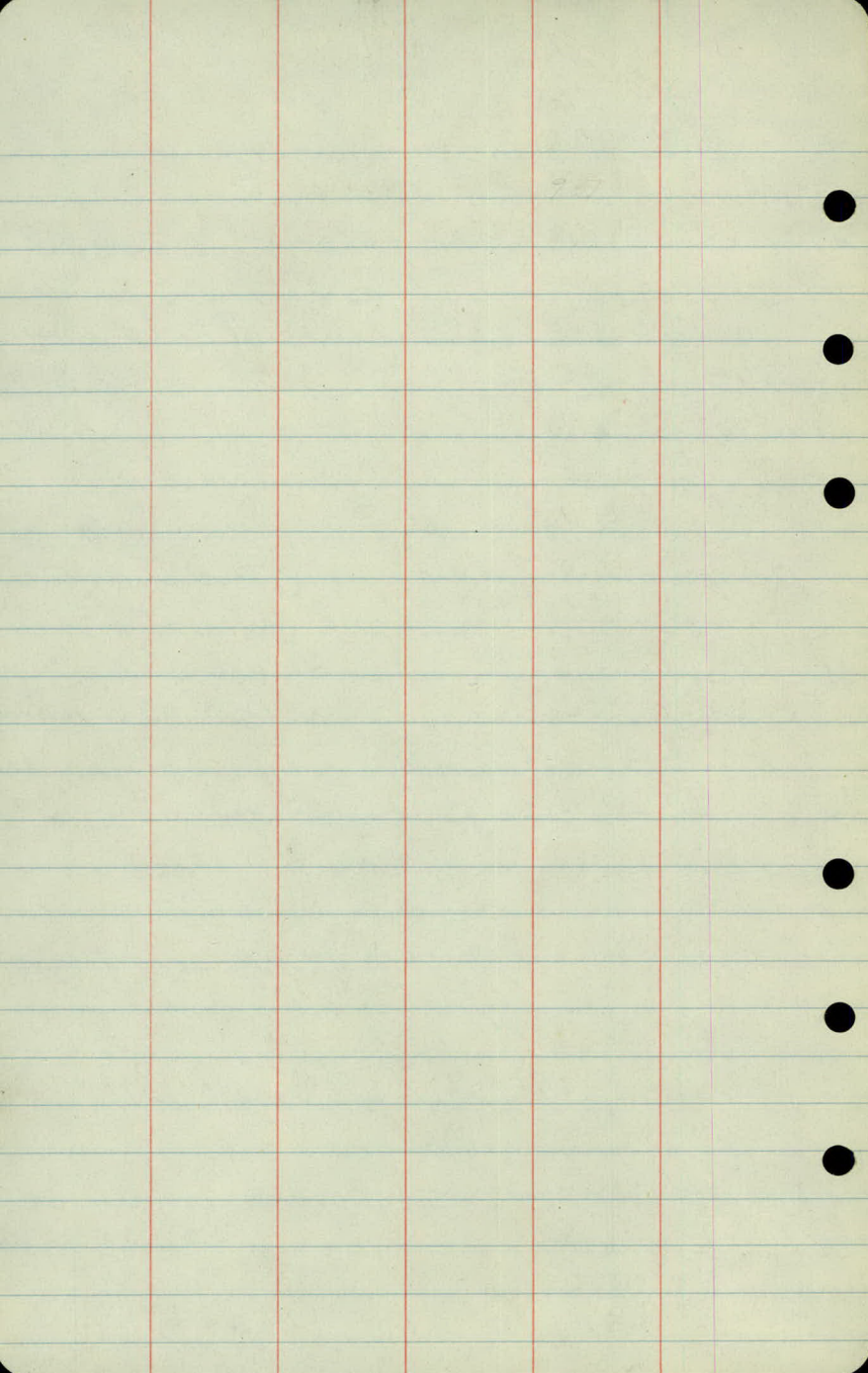
Spike in 8" Oak 50' Rt 7+67 (Ash St. Notes '33)

Spike in Twin 8" Elm S.W. Cor. Birch St & Linden

Top Boulder (Go to chow)

Spike in 6" Oak S.E. Cor. Highland Ave & Cedar

Spike in 10" Elm 30' Lt Sta 13+75 (Highland Ave)



Slope stakes

Highland Lane

Cedar St to Ash St.

Sta	+	π	-	Grade
B.M.	5.32	972.95		(967.63)

0 +00

+19

69.2

+50

68.8

1

68.9

+50

67.7

2

66.9

+50

65.8

3

64.5

+33

63.5

+65

62.2

4

61.1

12/10/37
K.A.
L.C.
M.B.

Gr. Rod Lt. F. Rt.

Spk. in 6" Oak S.E. Cor. Highland & Cedar

4.2	$30.2' / \frac{1.6}{12.6}$	$\frac{3.3}{10.9}$	$\frac{5.9}{120.8/22.6'}$
4.7	$30.6' / \frac{1.9}{12.8}$	$\frac{3.6}{11.1}$	$\frac{5.8}{120.9/22.8'}$
5.3	$29.0' / \frac{3.3}{12.0}$	$\frac{4.0}{11.3}$	$\frac{5.3}{120.0/25.0'}$
6.1	$27.8' / \frac{4.1}{11.4}$	$\frac{5.2}{10.9}$	$\frac{5.3}{120.8/26.6'}$
7.2	$27.4' / \frac{6.0}{11.2}$	$\frac{6.1}{11.1}$	$\frac{6.3}{120.9/26.8'}$
8.5	$27.4' / \frac{7.3}{11.2}$	$\frac{7.2}{11.3}$	$\frac{6.1}{122.9/29.8'}$
9.5	$28.0' / \frac{8.0}{11.5}$	$\frac{8.1}{11.4}$	$\frac{6.1}{123.9/31.8'}$
10.8	$27.4' / \frac{9.6}{11.2}$	$\frac{9.7}{11.1}$	$\frac{8.1}{122.7/30.4'}$
11.9	$25.6' / \frac{11.6}{10.3}$	$\frac{11.4}{10.5}$	$\frac{10.3}{116/28.2'}$

Sta	+	Σ	-	Grade
		972.95		
4	+50			59.2
T.P.	0.41	959.94	13.42	959.53
5				57.3
	+50			55.4
6				53.5
	+28			52.5
	+62			51.2
7				49.7
	+60			47.5
8				45.9
T.P.	0.39	946.74	13.59	946.35
	+50			44.0
	+80			43.0

Gr. Rod

L.

A.

Rt.

12.8

$$25.6' / \frac{13.5}{10.9}$$

$$\frac{13.4}{10.9}$$

$$\frac{12.0}{11.8} / 25.6'$$

2.6

$$27.4' / \frac{1.4}{11.2}$$

$$\frac{1.1}{11.5}$$

$$\frac{0.4}{12.2} / 29.4'$$

4.5

$$28.4' / \frac{2.3}{11.7}$$

$$\frac{1.9}{12.6}$$

$$\frac{1.1}{13.4} / 31.8'$$

6.4

$$28.6' / \frac{2.6}{11.8}$$

$$\frac{3.6}{12.8}$$

$$\frac{2.2}{14.2} / 33.0'$$

7.4

$$28.2' / \frac{5.8}{11.6}$$

$$\frac{4.4}{13.0}$$

$$\frac{4.0}{13.4} / 31.8'$$

8.7

$$27.4' / \frac{7.5}{11.2}$$

$$\frac{6.5}{12.2}$$

$$\frac{5.8}{12.9} / 30.8'$$

10.2

$$27.4' / \frac{2.0}{11.2}$$

$$\frac{7.6}{12.6}$$

$$\frac{6.4}{12.8} / 32.6'$$

12.4

$$31.2' / \frac{9.3}{13.1}$$

$$\frac{8.1}{14.3}$$

$$\frac{13}{14.1} / 33.0'$$

14.0

$$31.6' / \frac{10.7}{13.3}$$

$$\frac{14.8}{13.2}$$

$$\frac{11.6}{12.4} / 29.8'$$

2.7

$$25.0' / \frac{2.7}{10.0}$$

$$\frac{3.7}{-1.0}$$

$$\frac{3.7}{12.0} / 23.0'$$

3.7

$$19.4' / \frac{6.3}{-3.2}$$

$$\frac{7.1}{-3.4}$$

$$\frac{5.0}{12.0} / 22.4'$$

Sta	+	π	-	Grade
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746.74

9				43.0
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	+2.0			41.7
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	+5.0			40.8
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10				39.6
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	+5.0			38.7
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11				38.1
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I.P.	2.65	938.87	10.52	936.22
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	+5.0			37.7
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12				37.5
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	+5.0			37.3
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13				37.1
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	+5.0			36.8
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B.M.			3.46	935.41
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935.42

Gr. Rod

L_tL_tL_t

4.7

$$\frac{208}{-3.9} / \frac{8.6}{-3.9}$$

$$\frac{8.3}{-3.6}$$

$$\frac{6.3}{204} / 21.8'$$

5.0

$$\frac{22.2}{-4.6} / \frac{9.6}{-4.6}$$

$$\frac{9.0}{-4.0}$$

$$\frac{8.4}{3.9} / 17.8'$$

5.9

$$\frac{22.0}{-4.5} / \frac{10.4}{-4.5}$$

$$\frac{10.0}{-4.1}$$

$$\frac{9.1}{-3.8} / 20.6'$$

7.1

$$\frac{20.6}{-3.8} / \frac{10.7}{-3.8}$$

$$\frac{10.1}{-3.6}$$

$$\frac{10.9}{-2.8} / 20.6'$$

8.0

$$\frac{18.8}{-2.9} / \frac{10.9}{-2.9}$$

$$\frac{11.3}{-2.3}$$

$$\frac{11.2}{-3.2} / 17.4'$$

8.6

$$\frac{18.2}{-2.6} / \frac{11.2}{-2.6}$$

$$\frac{11.4}{-2.8}$$

$$\frac{11.5}{-2.9} / 18.8'$$

1.2

$$\frac{18.6}{-2.8} / \frac{4.0}{-2.8}$$

$$\frac{3.9}{-2.7}$$

$$\frac{3.8}{-2.6} / 17.2'$$

1.4

$$\frac{19.0}{-3.0} / \frac{4.4}{-3.0}$$

$$\frac{4.0}{-2.6}$$

$$\frac{3.5}{-2.1} / 17.2'$$

1.6

$$\frac{20.0}{-3.5} / \frac{5.1}{-3.5}$$

$$\frac{4.4}{-2.8}$$

$$\frac{3.2}{206} / 21.6'$$

175

$$\frac{18.3}{3.0} / \frac{4.1}{3.0}$$

$$\frac{4.1}{3.8} / 15.7'$$

1.8

$$\frac{20.0}{-3.5} / \frac{5.3}{-3.5}$$

$$\frac{4.5}{-2.7}$$

$$\frac{3.5}{20.3} / 21.6'$$

2.1

$$\frac{19.0}{-2.5} / \frac{4.6}{-2.5}$$

$$\frac{4.5}{-2.4}$$

$$\frac{3.5}{20.3} / 21.6'$$

Spk. in 10" Elm N.W. Cor. Highland & Birch

Sta.	+	π	-	Grade
		928.87		
14				36.6
	+30			36.5
	+83			36.3
15		Pt. 40' C.M.		36.2
	+12			36.1
	+50			36.0
T.P.	4.99	958.64	5.22	989.65
16				35.8
	+50			35.5
17				35.3
	+50			35.1
18				34.9

Gr. Rod

L_tL_cR_t

2.3

$$22.8 / \frac{3.4}{20.4}$$

$$\frac{3.7}{-1.4}$$

$$\frac{4.3}{20.0 / 21.0}$$

2.4

$$23.8 / \frac{3.0}{20.4}$$

$$\frac{3.6}{-1.2}$$

$$\frac{4.2}{20.2 / 21.4}$$

2.6

$$20.0 / \frac{6.1}{3.5}$$

$$\frac{6.6}{-7.0}$$

$$\frac{6.9}{4.3 / 21.6}$$

2.7

$$18.9 / \frac{6.1}{3.5}$$

$$\frac{7.2}{6.1 / 21.1}$$

2.8

$$19.4 / \frac{6.0}{3.2}$$

$$\frac{6.7}{-3.9}$$

$$\frac{7.0}{-4.2 / 21.4}$$

2.9

$$18.8 / \frac{5.8}{-2.9}$$

$$\frac{5.3}{-2.4}$$

$$\frac{5.5}{-2.6 / 18.2}$$

2.8

$$18.4 / \frac{5.5}{-2.7}$$

$$\frac{5.3}{-2.5}$$

$$\frac{5.3}{-2.5 / 18.0}$$

3.1

$$22.8 / \frac{4.2}{20.9}$$

$$\frac{4.2}{-1.1}$$

$$\frac{4.1}{21.0 / 23.0}$$

3.3

$$24.2 / \frac{3.7}{21.6}$$

$$\frac{4.0}{-0.7}$$

$$\frac{4.1}{21.2 / 23.4}$$

3.5

$$23.8 / \frac{4.1}{21.4}$$

$$\frac{4.2}{-0.7}$$

$$\frac{4.4}{21.1 / 23.2}$$

3.7

$$22.2 / \frac{5.1}{20.6}$$

$$\frac{5.4}{-1.7}$$

$$\frac{5.3}{20.0 / 17.0}$$

Sta	+	π	-	Grade
		938.64		
18	+50			34.7
19				34.5
	+50			34.5
20				34.6
	+50			34.9
T.P.	5.47	942.95	1.16	937.48
21				35.2
	+50			35.8
22				36.3
	+50			36.9
23				37.3
	+23			37.7

Gr. Rod

Lt

R

Rt

3.9

$$21.2 / \frac{5.8}{20.1}$$

$$\frac{66}{-27}$$

$$\frac{71}{-52} / 19.4'$$

4.1

$$18.8 / \frac{7.0}{-29}$$

$$\frac{73}{-32}$$

$$\frac{75}{-34} / 19.0'$$

4.1

$$18.8 / \frac{7.0}{-29}$$

$$\frac{70}{-29}$$

$$\frac{68}{-27} / 18.4'$$

4.0

$$\frac{75}{33.0} \quad 19.2 / \frac{7.1}{-31}$$

$$\frac{71}{-31}$$

$$\frac{68}{-28} / 18.6'$$

3.7

$$19.4 / \frac{6.9}{-32}$$

$$\frac{6.9}{-32}$$

$$\frac{66}{-29} / 18.8'$$

Nail in R.R. ch.

7.8

$$22.2 / \frac{9.2}{106}$$

$$\frac{87}{-09}$$

$$\frac{71}{107} / 26.4'$$

7.2

$$22.2 / \frac{8.6}{106}$$

$$\frac{75}{-06}$$

$$\frac{64}{108} / 26.6'$$

6.7

$$19.9 / \frac{8.9}{-2.2}$$

$$\frac{8.0}{-1.3}$$

$$\frac{5.2}{115} / 28.0'$$

6.1

$$19.4 / \frac{8.3}{-2.2}$$

$$\frac{6.9}{-0.8}$$

$$\frac{4.0}{121} / 29.2'$$

5.5

$$22.6 / \frac{6.7}{20.8}$$

$$\frac{5.0}{10.5}$$

$$\frac{2.4}{111} / 31.2'$$

5.3

$$22.8 / \frac{6.4}{20.9}$$

$$\frac{4.6}{10.7}$$

$$\frac{1.5}{118} / 32.6'$$

Sta.	+	π	-	Grade
		942.95		

23	+60			38.1
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1.P	6.03	944.96	4.02	938.93
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24				38.6
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	+50			39.2
--	-----	--	--	------

25				39.7
----	--	--	--	------

	+50			40.3
--	-----	--	--	------

26	+06			40.9
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	+30			41.2
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B.M.			2.88	942.12
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942.13

10/27/39

Gr. Rod

L_tL_eR_t

4.9

$$22.4' \frac{6.2}{120.7}$$

$$\frac{4.5}{10.4}$$

$$\frac{1.8}{12.1/31.2'}$$

6.4

$$22.2' \frac{7.8}{20.6}$$

$$\frac{6.3}{10.1}$$

$$\frac{4.1}{12.3/29.6'}$$

5.8

$$23.6' \frac{6.5}{21.3}$$

$$\frac{5.5}{10.3}$$

$$\frac{3.7}{12.1/29.2'}$$

5.3

$$24.6' \frac{5.5}{21.8}$$

$$\frac{5.1}{10.2}$$

$$\frac{4.6}{10.7/26.4'}$$

4.7

$$26.8' \frac{3.8}{10.9}$$

$$\frac{4.2}{10.5}$$

$$\frac{4.3}{10.4/25.8'}$$

4.1

$$24.6' \frac{4.3}{21.8}$$

$$\frac{3.5}{10.6}$$

$$\frac{3.7}{10.4/25.8'}$$

Sph. in 12" Elm NE Cor Fish & Highland

